

Specifications



Photo is representative

Eaton 211824

Eaton Moeller series xEffect - AZ MCB.
Miniature circuit breaker (MCB) AZ, 3 pole,
Tripping characteristic: D, Rated current In:
80 A

General Specifications

PRODUCT NAME	Eaton Moeller series xEffect - AZ MCB
CATALOG NUMBER	211824
EAN	4015082118242
PRODUCT LENGTH/DEPTH	90 mm
PRODUCT HEIGHT	75 mm
PRODUCT WIDTH	81 mm
PRODUCT WEIGHT	0.64 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 60947-2 EN45545-2 IEC 61373
MODEL CODE	AZ-3-D80

Delivery programme

APPLICATION

- Switchgear for industrial and advanced commercial applications
- xEffect - Switchgear for industrial and advanced commercial applications

NUMBER OF POLES	Three-pole
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NUMBER OF POLES (TOTAL)	3
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NUMBER OF POLES (PROTECTED)	3
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TRIPPING CHARACTERISTIC	D
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RELEASE CHARACTERISTIC	D
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AMPERAGE RATING	80 A
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TYPE	• AZ • Miniature circuit breaker
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Technical data - electrical

VOLTAGE TYPE	AC
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VOLTAGE RATING	230 V AC / 400 V AC
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VOLTAGE RATING AT DC	60 V DC (per pole)
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RATED OPERATIONAL VOLTAGE (UE) - MAX	400 V
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RATED INSULATION VOLTAGE (UI)	440 V
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RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	4 kV
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FREQUENCY RATING - MIN	50 Hz
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FREQUENCY RATING - MAX	60 Hz
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RATED SWITCHING CAPACITY (IEC/EN 60947-2)	20 kA
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OPERATIONAL SWITCHING CAPACITY	20 kA
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RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 60898) AT 230 V	0 kA
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RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 60898) AT 400 V	0 kA
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RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2) AT 230 V	20 kA
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RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2) AT 400 V	20 kA
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ADMISSIBLE BACK-UP FUSE - MAX	200 A gL/gG
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SELECTIVITY CLASS	3
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OVERVOLTAGE CATEGORY	III
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POLLUTION DEGREE	2
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LIFESPAN, ELECTRICAL	10000 operations
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DIRECTION OF INCOMING SUPPLY	As required
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DIRECTION OF INCOMING SUPPLY	As required
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Technical data - mechanical

FRAME	45 mm
ENCLOSURE WIDTH	90 mm
WIDTH IN NUMBER OF MODULAR SPACINGS	4.5
BUILT-IN DEPTH	75 mm
MOUNTING WIDTH PER POLE	27 mm
MOUNTING METHOD	Top-hat rail IEC/EN 60715
DEGREE OF PROTECTION	IP40 (when fitted) IP20
TERMINALS (TOP AND BOTTOM)	Lift terminals
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MIN	2.5 mm ²
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MAX	50 mm ²
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN	2.5 mm ²
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX	50 mm ²
TERMINAL CAPACITY (CONTROL CABLE)	2.5 mm ² - 50 mm ²
TERMINAL PROTECTION	Finger and hand touch safe, DGUV VS3, EN 50274

Design verification as per IEC/EN 61439 - technical data

RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	80 A
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT	7.1 W
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	21.4 W 21.3 W
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT	0 W
HEAT DISSIPATION CAPACITY	0 W
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE - MAX	55 °C

Design verification as per IEC/EN 61439

10.2.2 CORROSION RESISTANCE	Meets the product standard's requirements.
10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES	Meets the product standard's requirements.
10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT	Meets the product standard's requirements.
10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS	Meets the product standard's requirements.
10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION	Meets the product standard's requirements.
10.2.5 LIFTING	Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 MECHANICAL IMPACT	Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 INSCRIPTIONS	Meets the product standard's requirements.
10.3 DEGREE OF PROTECTION OF ASSEMBLIES	Does not apply, since the entire switchgear needs to be evaluated.
10.4 CLEARANCES AND CREEPAGE DISTANCES	Meets the product standard's requirements.
10.5 PROTECTION AGAINST ELECTRIC SHOCK	Does not apply, since the entire switchgear needs to be evaluated.
10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS	Does not apply, since the entire switchgear needs to be evaluated.
10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS	Is the panel builder's responsibility.
10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS	Is the panel builder's responsibility.
10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH	Is the panel builder's responsibility.
10.9.3 IMPULSE WITHSTAND VOLTAGE	Is the panel builder's responsibility.
10.9.4 TESTING OF ENCLOSURES MADE OF	Is the panel builder's responsibility.

Additional information

CURRENT LIMITING CLASS	3
FEATURES	Additional equipment possible
SPECIAL FEATURES	Ambient temperature hint: a 1 °C increase results in a 0.5% linear reduction of current carrying capacity

INSULATING MATERIAL

10.10 TEMPERATURE RISE

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

10.11 SHORT-CIRCUIT RATING

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.12 ELECTROMAGNETIC COMPATIBILITY

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.13 MECHANICAL FUNCTION

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Resources

APPLICATION NOTES

[eaton-maximum-cable-lengths-for-eatons-protective-devices-brochure-br034006en-en-us.pdf](#)

[eaton-quality-standards-for-railway-applications-application-paper-ap003005en-en-us.pdf](#)

BROCHURES

[eaton-pdd-railrolling-stock-brochure-br011002en-en-us.pdf](#)

CHARACTERISTIC CURVE

[eaton-mcb-xeffect-az-characteristic-curve.eps](#)

[eaton-xeffect-az-mcb-characteristic-curve-006.jpg](#)

[eaton-mcb-current-xeffect-az-characteristic-curve-002.eps](#)

[eaton-xeffect-az-mcb-characteristic-curve-005.jpg](#)

[eaton-mcb-current-xeffect-az-characteristic-curve.eps](#)

[eaton-mcb-xeffect-az-characteristic-curve-002.eps](#)

[eaton-mcb-tripping-characteristic-xeffect-az-characteristic-curve.eps](#)

DECLARATIONS OF CONFORMITY

[DA-DC-03_AZ](#)

DRAWINGS

[eaton-xpole-mmct-mcb-dimensions.jpg](#)

[eaton-mcb-xeffect-az-dimensions-004.eps](#)

[eaton-xeffect-az-mcb-3d-drawing.jpg](#)

[eaton-xeffect-az-mcb-3d-drawing-002.jpg](#)

[eaton-mcb-faz-xeffect-faz-3d-drawing-003.eps](#)

ECAD MODEL

[DA-CE-ETN.AZ-3-D80](#)

INSTALLATION INSTRUCTIONS	IL019148ZU
MCAD MODEL	DA-CD-az_3p DA-CS-az_3p
WIRING DIAGRAMS	eaton-xpole-mmc4-6-m-mcb-wiring-diagram-005.jpg eaton-mcb-xeffect-faz-wiring-diagram-003.eps

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



Eaton Corporation plc
Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

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